

Papermaking potential of *Acacia dealbata* and *Acacia melanoxylon*

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<http://search.informit.com.au/documentSummary;dn=586621241335076;res=IELENG>.

Abstract

The pulping and papermaking potential of *Acacia dealbata* and *Acacia melanoxylon* were studied using *Eucalyptus globulus* as a reference. Pulp yield, alkali consumption and delignification in the kraft process, of both species, compare very well with the reference. Pulp yield can be higher than that of *E. globulus* and the residual lignin content lower after cooking, which is in good agreement with the lower lignin and extractives content of the wood samples used.

Pulps produced from *Acacia* have slightly lower fibre length and coarseness and higher fibre width and wet fibre flexibility than *E. globulus* pulps. As a consequence of fibre characteristics, the paper produced from *Acacia* is denser and exhibits higher tensile and burst strength, and lower tear resistance than that from *E. globulus*, at a given PFI revolution. For the same sheet density *E. globulus* displays higher strength properties, but the consequence of achieving this is a lower drainage rate and higher energy consumption in refining.

Keywords: Wood pulp; *Acacia dealbata*; *Acacia melanoxylon*; Fibre flexibility; Papermaking potential; *Eucalyptus globulus*; Kraft pulp; Paper properties